ABSTRACT

An optical fingerprint image input device for a mobile apparatus includes: a plate-shaped fingerprint contact member; a distortion correcting member for correcting distortions; light sources disposed at both sides of the fingerprint contact member, other than an inclined surface or a back light source in a liquid crystal display element; focusing means disposed at an inclined surface side of the distortion correcting member; and an image sensor. In other words, the fingerprint contact member and the distortion correcting member having respective set-up inclined angles are disposed to discern sweat, water or oil and to correct a trapezoidal distortion which is a disadvantage that occurs when a thin fingerprint contact medium is used, and to form a lens system comprised of a cylindrical lens and a spherical lens for adjustment of a ratio of transversal to longitudinal widths of an image. By this configuration, problems generated by the thin optical fingerprint input device can be overcome to minimize the loss of information necessary for fingerprint verification and a region of used image sensor can be established in consideration of a design to be capable of obtaining fingerprint information of a high resolution. Furthermore, as a thin optical fingerprint input device can be embodied, the present invention can be applied to a mobile apparatus like a cellular phone, and a conventional secrecy-maintaining function performed by a secret number can be replaced by fingerprint information to thereby increase the secrecy of the mobile apparatus.